

Date: Tuesday, 14/10/2008 3:40:20 PM  
 User: Julie Lecocq

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 206L FWD X-TUBE  
 Job Number : 42599  
 Estimate Number : 10553  
 P.O. Number :  
 This Issue : 14/10/2008 S.O. No. :  
 Prsht Rev. : NC Part Number : D206667103  
 First Issue : 11 Type : CROSSTUBES Drawing Number : D206-667-143 REVB *LDI 9415 Rev A*  
 Previous Run : 42586 Drawing Revision : B *CP 08-10-15*  
 Written By :  
 Checked & Approved By : *MD 08.10.14*  
 Comment : Est Rev:F 05.09.01 Add holes for compatibility with Bell  
 Skid tubes KJ/JLM  
 Est Rev:G 08-06-03 update as per DSI9415 (ECN1198) DD  
 verified by:

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



*DP for MD 08.10.20*



Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D206-667-103 CHG003 *508/11/14*

2.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

3.0 D206667103TRN Crosstube Turning Detail



Comment: Qty.: 1.0000 Each(s)/Unit, Total : 1.0000 Each(s)

CROSSTUBE TURNING DETAIL

batch *042706*

*DP/MB 08-10-30*

4.0 BENDING BENDING MACHINE - SKIDTUBES



Comment: BENDING MACHINE

Bend tube as per Dwg D206-667-143 using CNC bender program 206B-fw and Folio FT

*DP/MD 08-10-30*

5.0 QC15 DIMENSIONAL CHECK OF X-TUBES



Comment: DIMENSIONAL CHECK OF X-TUBES

*08-11-03*

*P10*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D206-067-103 PAR #:        Fault Category:        NCR: Yes ☒ No ☐ DQA:        Date: 08-11-18

Resolution:        Disposition:        QA: N/C Closed:        Date:       

NCR: <u>4250A</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>08-10-31</u>	<u>4.0</u>	<u>Tube was bent, uneven</u>  <u>R.C. Variation from tube to tube</u> <u>process.</u>	<u>[Signature]</u>	<u>dr. cutoff A200.630</u> <u>cutoff B 20.500 to even</u> <u>the tube for installation</u>	<u>[Signature]</u> <u>08-11-18</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>

NOTE: Date & initial all entries

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Job Number



Seq. #: Machine Or Operation:

Description :

6.0 CROSSTUBES

CROSSTUBES RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill holes & ream using drill Jig DT8541 & DT8542 as per Dwg D206-667-143. Drill all (3) top holes.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8541 & DT8542 as per Dwg D206-667-143. Drill only the top (2) holes.

5-Drill pilot holes as per Dwg D206-667-143. Drill only the top (2) holes.

6-Drill Fwd rivet holes using drill Jig DT8787FWD as per Dwg D206-667-143.

Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8787AFT as per Dwg D206-667-141.

8-C'sink holes as per Dwg D206-667-143. Allow rivet to sit below surface to compensate for paint.

9-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-143

10-Scribe part # and batch # using vibrating stylus as per Dwg D206-667-143  
Inside of Cuff (Do not engrave on outside of tube)

7.0 HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

8.0 QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

9.0 QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

10.0 OUTSIDE SERV.11

OUTSIDE SERVICE -CROSSTUBES



Comment: Sub-Contracting OUTSIDE SERVICE -CROSSTUBES

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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11.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Inspect for transit damage

Ensure copy of NDT results attached to work order.

12.0 Q06 DIMENSIONAL CHECK



Comment: Inspect for damage & ensure results are as per Dwg D206-667-103

13.0 SPRAY PAINTING SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per QSI 005 4.2

14.0 QC14 INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

Wrap in plastic bag to protect from scratches

15.0 D3595075395 RUBBER CUSHION .75" x 3.95



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

RUBBER CUSHION .75" x 3.95

16.0 D2873043 Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-043

Nut Plate

40218

17.0 D2873045 Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-045

Nut Plate

38316

BT 08-11-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D206-667-103 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☐ No ☒ DQA: 11 Date: 08-11-13  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: <u>42599</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08-11-13	12-0	The incorrect NDT results were attached to the work's result. P.C. Post Copy was used as a reference & was included in the new results, submitted to Part	<u>MS/11/12</u>	See NCR 08-114 Attach the correct NDT results	<u>MS/11/13</u>	<u>08-11-13</u>	<u>MS/11/12</u>	<u>08-11-13</u>

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Part Number: D206667103

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

18.0	D28911	2.25 Support
------	--------	--------------



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2891-1 Support 37655

RT 08-11-12

19.0	MS20601AD4W8	RIVET
------	--------------	-------



Comment: Qty.: 14.0000 Each(s)/Unit Total: 14.0000 Each(s)

Pick:

Qty Part number Description Batch

14 MS20601AD4W8 Rivet 108521

RT 08-11-11

20.0	MS2192020	Clamp (per MIL-DTL-8783C)
------	-----------	---------------------------



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

Pick:

Qty Part number Description Batch

4 MS21920-20 Clamp 107501

RT 08-11-12

21.0	CROSTUBES	CROSTUBES RESOURCE 1
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Comment: LANDING GEAR RESOURCE 1

SEE DSJ 9415

1-Install abrasion strips as per QSL 035 using DT8579. Note: (2) Air holes should be facing up.

Magnabond 6393 108966 RT  
08-11-12

2-Install supports and clamps as per Dwg D4206-667-143. Torque clamps to 80-100 in lb

RT 08-11-12

3-Install nut plates as per Dwg D206-667-143. Touch-up rivet heads with Imron paint.

22.0	QC5	INSPECT WORK TO CURRENT STEP
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Comment: INSPECT WORK TO CURRENT STEP

08-11-13 (1)

23.0	PACKAGING 1	PACKAGING RESOURCE #1
------	-------------	-----------------------



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Part Number: D206667103

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

24.0	AN532A	Bolt
------	--------	------



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)  
Bolt  
Batch: M109068

25.0	MS21042L5	Nut
------	-----------	-----



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)  
Nut  
Batch: M108827

26.0	AN57A	Bolt
------	-------	------



Comment: Qty.: 10.0000 Each(s)/Unit Total: 10.0000 Each(s)  
Pick:Packing Kit  
Qty Part number Description Batch  
10 AN5-7A Bolt M109060

27.0	AN530A	BOLT
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Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)  
Pick:Packing Kit  
Qty Part number Description Batch  
4 AN5-30A Bolt M105144

28.0	AN960JD516	Washer
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Comment: Qty.: 18.0000 Each(s)/Unit Total: 18.0000 Each(s)  
Pick:Packing Kit  
Qty Part number Description Batch  
18 AN960JD516 Washer M109282

29.0	QC4	INSPECT 100% KITS FOR COMPLETENESS
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Comment: INSPECT 100% KITS FOR COMPLETENESS

30.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206-667-103

Location:

PPP Rev:

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Job Number: 42599

Part Number: D206667103

Job Number:



Seq. #:

Machine Or Operation:

Description :

31.0

QC21

FINAL INSPECTION/W/O RELEASE



08/11/17 *[Signature]*

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



mf 08-11-14

D206 667 103 B42599

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

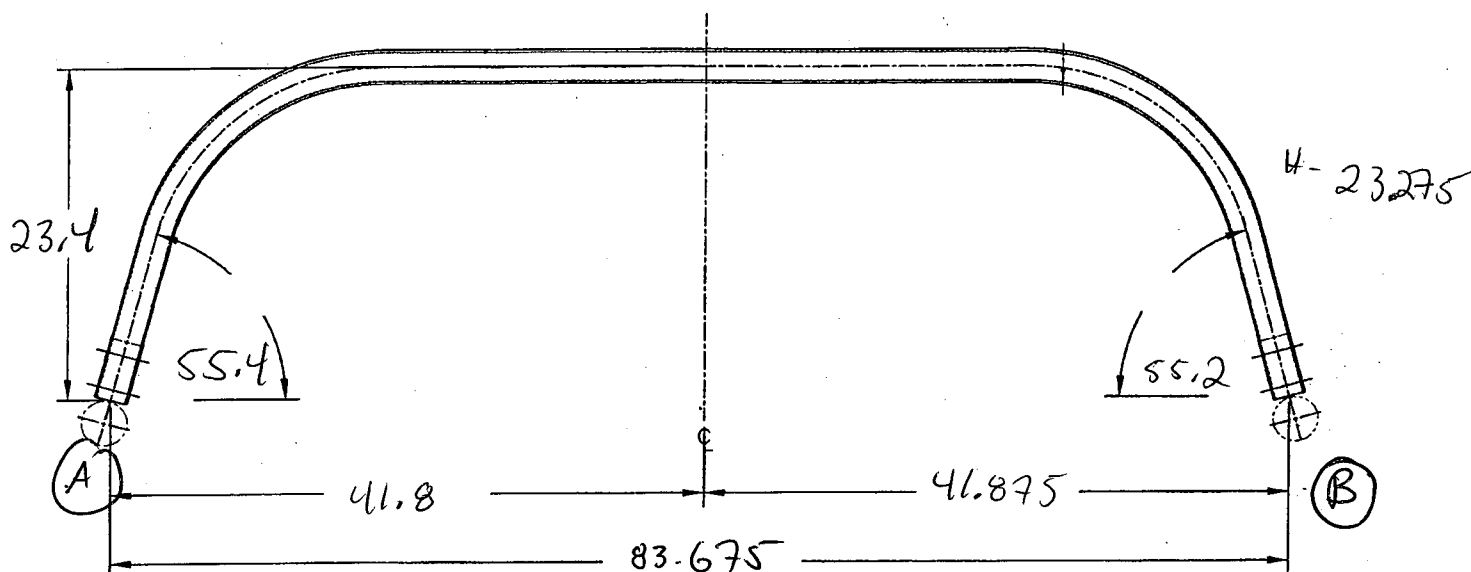
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**NOTE:** Date & initial all entries

DART AEROSPACE LTD		Work Order:	42599
Description: Crosstube High Fwd (206L)		Part Number:	D206-667-103
Inspection Dwg: D206-667-143 Rev: B		Page 1 of 1	

Required Dimension	Min	Max
Height	23.46	23.58
1/2 Span	41.86	41.98
Angle	54	56
Total Span	83.72	83.96



Comments
Tube sits well in the jig.
See PTO on W/D to drill the cuff at 0.6300
B @ 0.500 to make the tube even.

QC15 Inspection	QSI 612
Date	08.11.03

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	[Signature]

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED HDS	APPROVED HDS	DRAWING NO. D206-667-143	REV. B SHEET 1 OF 3
DATE 05.07.26		TITLE CROSSTUBE ASS'Y (206L HIGH FWD) NTS	
A	00.11.17	NEW ISSUE	
B	05.07.26	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	

RELEASED  
05.07.26

UNDER REVIEW

05.07.10 PH  
re-draw detail F  
PH 08.10.15

Qty	Part Number	Description
X	D206-667-143	CROSSTUBE ASSEMBLY (206L HIGH FWD)
1	D6002-115	CROSSTUBE
2	D2873-043	NUT PLATE
2	D2873-045	NUT PLATE
2	D2856-400-694	ABRASION STRIP
2	D2891-1	SUPPORT
14	MS20601AD4W8	RIVET (OR NAS9302B-4-8)
4	MS21920-20	CLAMP

05.9415  
PH 08.10.15

#### GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6002-115  
FINISHED LENGTH = 104.98±0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 10 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-400-694 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2891-1 SUPPORT, PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) IT IS OPTIONAL TO SEAL EDGES OF SUPPORTS AND ABRASION STRIP USING SIKAFLEX 241/291 SEALANT.
- 12) TORQUE CLAMPS 80 TO 100 IN-LB.

PH 01-10-15  
SEE DSI  
9415  
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

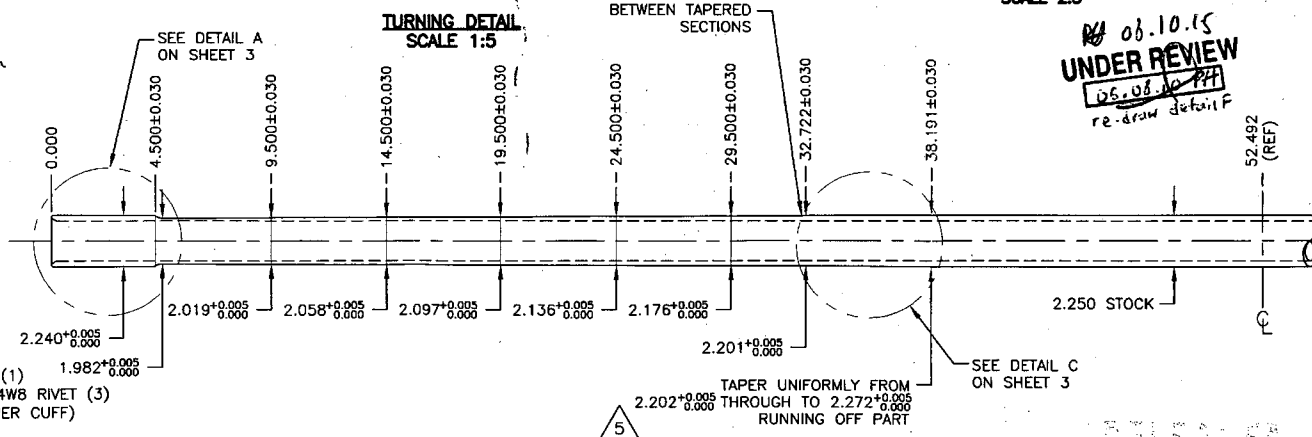
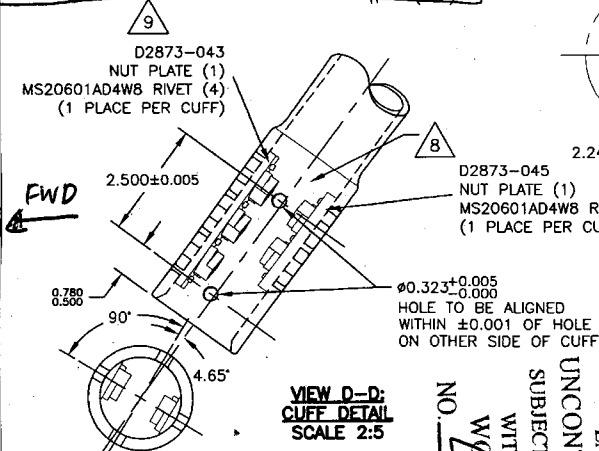
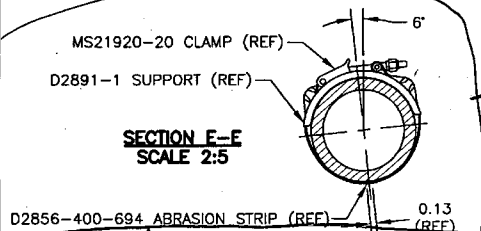
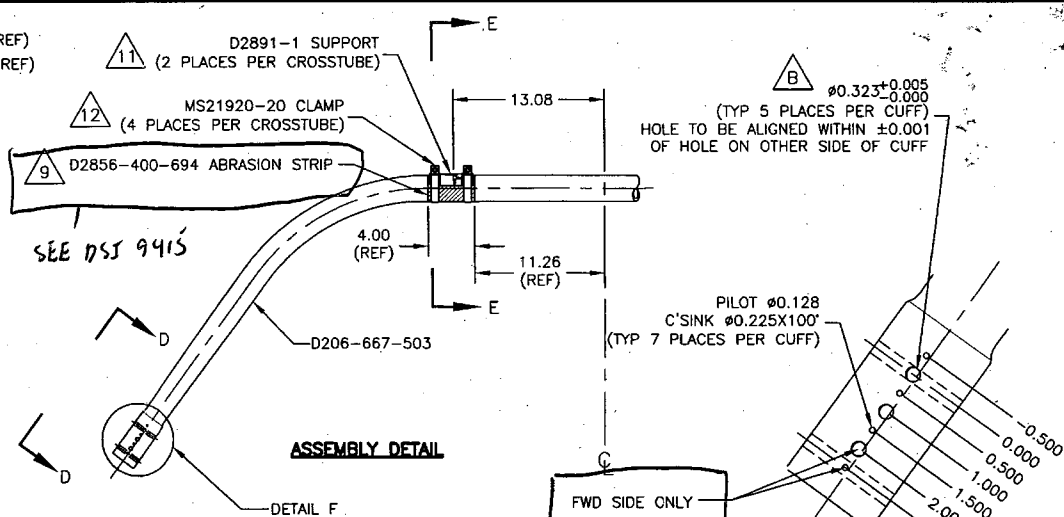
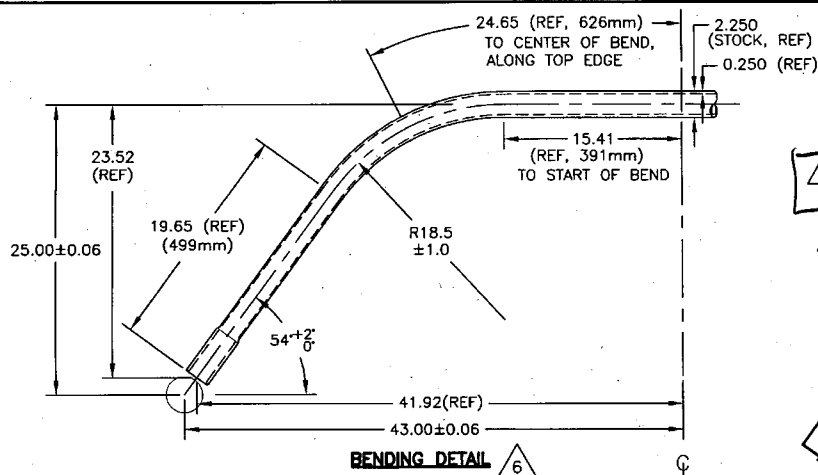
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries





06.10.15  
UNDER REVIEW  
06.08.10 PH  
re-draw detail F

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THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.				PH	PH		
				CHECKED	APPROVED	DRAWING NO.	SHEET 2 OF 3
				DS	DS	D206-667-143	
				DATE		TITLE	SCALE
				05.07.26		CROSSTUBE ASS'Y (206L HIGH FWD)	1:10

SHOP COPY  
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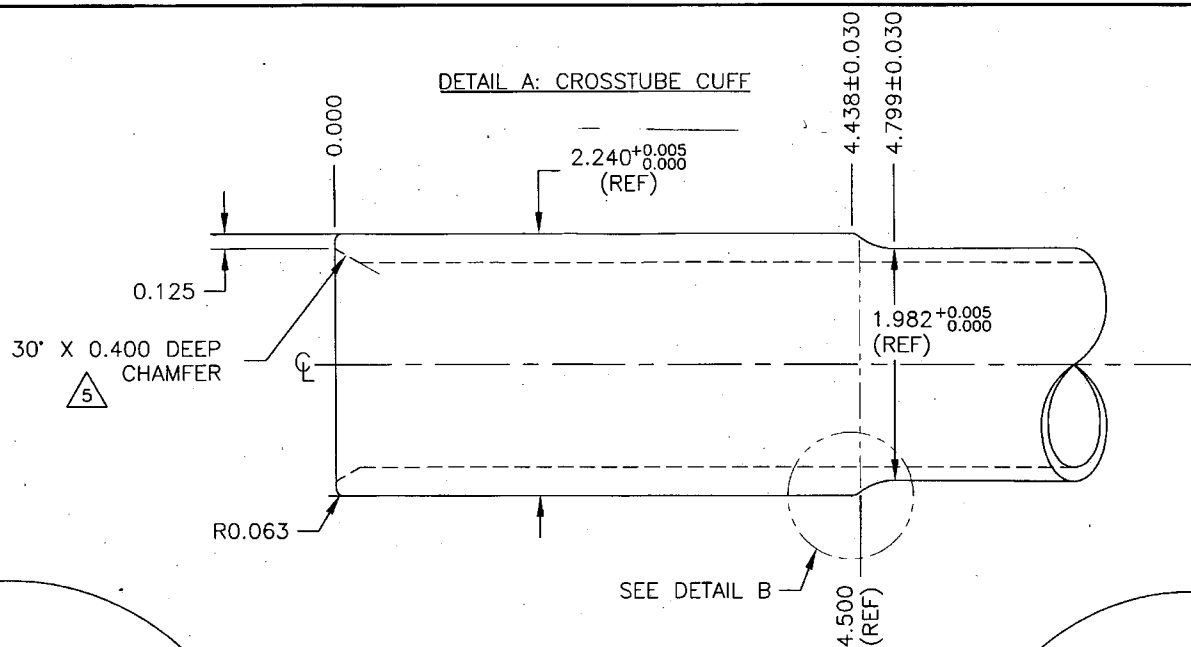
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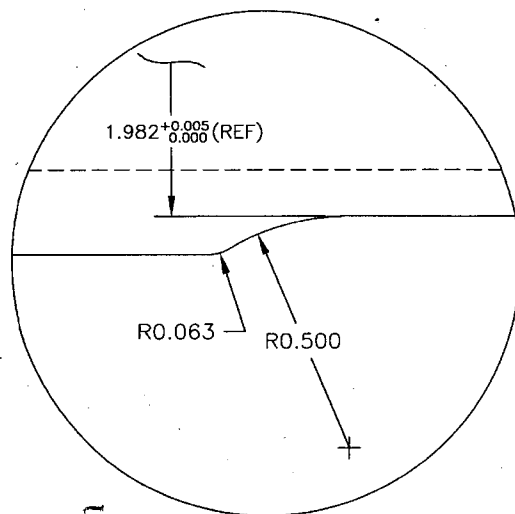
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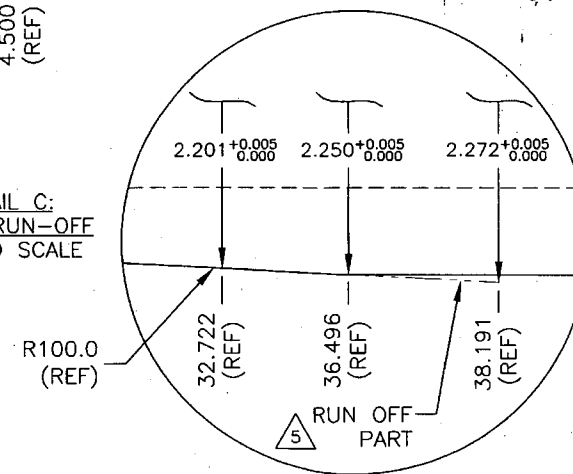


UNDER REVIEW  
26.03.10 PH  
re-draw detail F  
98.10.15



DETAIL B: CUFF  
TRANSITION  
SCALE 4:1

DETAIL C:  
TAPER RUN-OFF  
NOT TO SCALE



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CHECKED	PH	APPROVED	PH	DRAWING NO.	REV. B
DATE	05.07.26	TITLE	CROSSTUBE ASS'Y (206L HIGH FWD)	SHEET 3 OF 3	SCALE

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W/O: _____		WORK ORDER CHANGES					
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NO. 42599

# DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D206-667 REV. C AND  
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D206-667 REV. 2  
REF: CANADIAN STC: SH01-5  
REF: FAA STC: SR01304NY

For D206-667-101/-201/-103/-203 or D407-667-105 cross tubes at CHG 003 or later, the D2856-400-694/-773 abrasion strip has been removed, the center D2891-1 or D2892-1 support has been bonded onto the crosstube using Magnabond 6398 and D3595-075-395/-450 Rubber Cushions have been installed underneath the MS21920-20/-22 Clamps. Amend parts list of the IIN-D206-667 section 5 and ICA-D206-667 Section 32.8 as follows:

**REMOVE:**

ITEM	QTY -101	QTY -201	QTY -103	QTY -203	QTY -105	PART NUMBER	DESCRIPTION
13	2	2	2		2	D2856-400-694	ABRASION STRIP
14				2		D2856-400-773	ABRASION STRIP

**ADD:**

ITEM	QTY -101	QTY -201	QTY -103	QTY -203	QTY -105	PART NUMBER	DESCRIPTION
24	4	4	4		4	D3595-075-395	RUBBER CUSHION
25				4		D3595-075-450	RUBBER CUSHION

To prevent the supports from shifting on the D206-667-101/-201/-103/-203 or D407-667-105 crosstubes at CHG 002 or earlier, the D2891-1/D2892-1 supports should be removed and re-installed as follows:

- 1) Follow section 32.1 of ICA-D206-667 for the removal of the crosstubes from the helicopter.
- 2) Remove the qty (2) MS21920-20/-22 clamps from the crosstube that fasten the D2891-1/D2892-1 supports to the crosstube.
- 3) Remove the D2856-400-694/-773 abrasion strip from the crosstube per section 32.5 of ICA-D206-667.
- 4) Inspect the crosstube surface underneath the support for corrosion and mechanical damage per items 5.3.1 and 5.3.2 of the 300 hour inspection of ICA-D206-667. Repair damage within acceptable limits per item 5.3.3 of the 300 hour inspection in ICA-D206-667. Touch up finish per item 5.3.9 of the 300 hour inspection.
- 5) Abrade area to which support will be applied with 400 grit sandpaper. Saturate a clean cloth with MEK or 4105S Wash'n'Wipe Degreaser or equivalent and wipe area until there is no residue.
- 6) Apply a 0.03" to 0.06" thick layer of Magnabond 6398 underneath the D2891-1/D2892-1 support and re-install the support on the crosstube as shown in Figure 1. Position and secure the D2891-1/D2892-1 support on the crosstube using MS21920-20/-22 Clamps. Install a D3595-075-395/-450 Rubber cushion underneath each MS21920-20/-22 Clamp. Torque clamps 80-100 in-lb. Let the D206-667-101/-201/-103/-203 or D412-667-105 crosstube assembly cure as per the Magnabond 6398 instructions before re-installing the crosstube on the aircraft.

CANADA DEPARTMENT OF TRANSPORT AIRCRAFT CERTIFICATION BRANCH DAO # 01-O-01	
<b>APPROVED</b>	
BY: <u><i>D. Shepherd</i></u>	
D. SHEPHERD (DE # 02)	
DATE: <u>08.05.26</u>	
CERT. NO.: <u>SH01-5</u>	
ISSUE NO.: <u>3</u>	

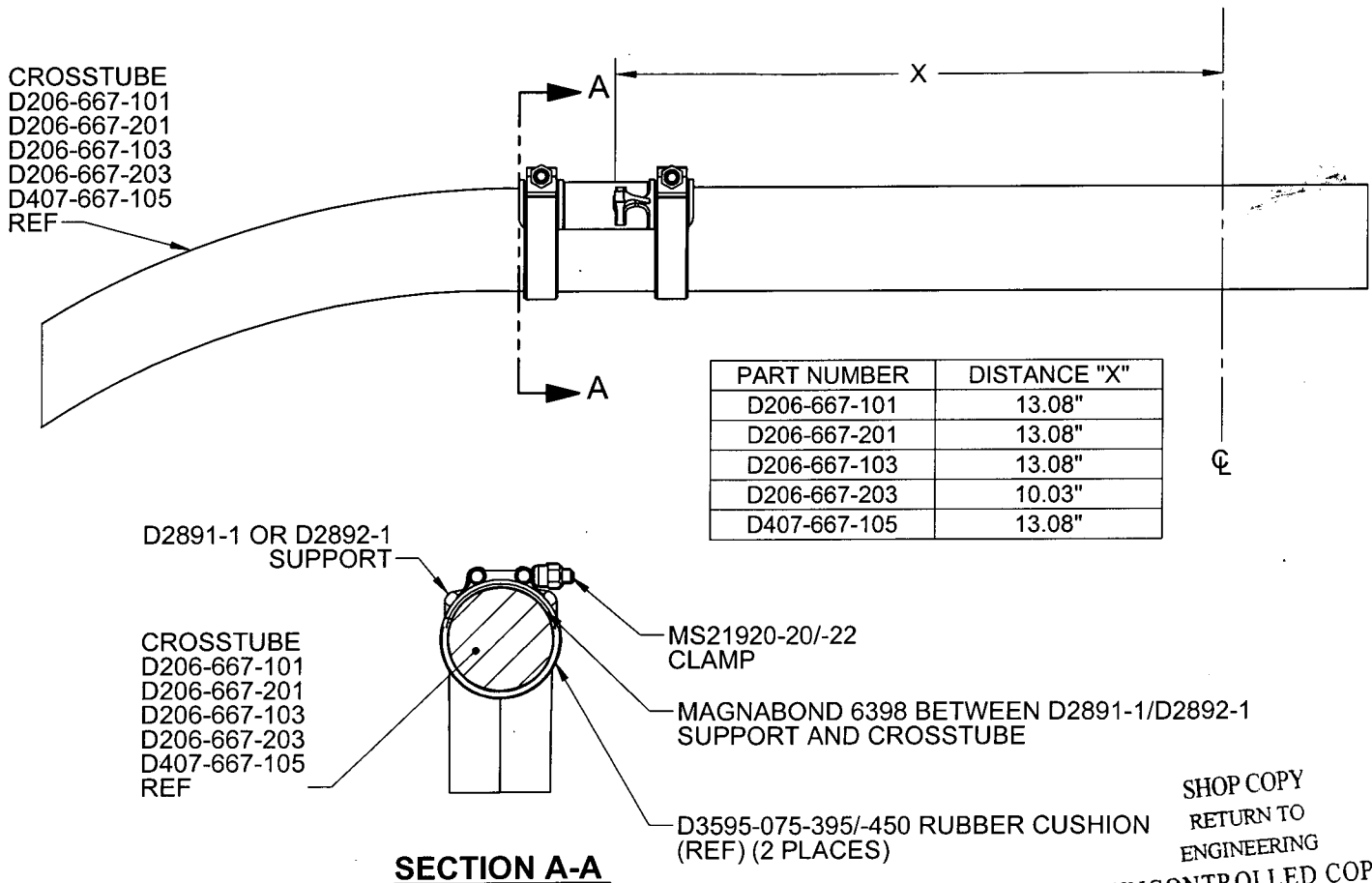
A	NEW ISSUE	HS	08.05.26
REV.	DESCRIPTION	BY	DATE
DESIGN	HS	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	HS		
CHECKED	<i>PH</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>[Signature]</i>	DSI 9415	SHEET 1 OF 2
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	<b>CROSSTUBE SUPPORT CHANGE</b> NTS	
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7) Re-install the D206-667-101/-201/-103/-203 or D412-667-105 crosstube per section 32.2 of ICA-D206-667.

For customers who would like to upgrade their D206-667-101/-201/-103/-203 or D412-667-105 crosstubes from CHG 002 or earlier to CHG 003, the following kit can be obtained from Dart:

QTY -011	QTY -013	PART NUMBER	DESCRIPTION
X		DSI 9415-011	CROSSTUBE SUPPORT CHANGE (USABLE ON D206-667-101/-201/-103 OR D407-667-105)
	X	DSI 9415-013	CROSSTUBE SUPPORT CHANGE (USABLE ON D206-667-203)
4		D3595-075-395	RUBBER CUSHION
	4	D3595-075-450	RUBBER CUSHION



**FIGURE 1 - CROSSTUBE SUPPORT**

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SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 42599

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

**APPROVED**

BY: D. Shepherd  
D. SHEPHERD (DE # 02)

DATE: 08.05.26  
CERT. NO.: SH01-5  
ISSUE NO.: 3

DESIGN	HS	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	HS		
CHECKED	<u>PH</u>	DRAWING NO.	REV. A
MFG. APPR.	<u>E</u>	DSI 9415	SHEET 2 OF 2
APPROVED	<u>[Signature]</u>	TITLE	SCALE
DE APPR.	<u>[Signature]</u>	CROSSTUBE SUPPORT CHANGE	NTS
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# LIQUID PENETRANT TEST REPORT

P- 09131

PAGE 1 OF 1

CLIENT Dart Aerospace DATE 2008-11-07 TIME AM ☐ PM ☐  
ATTENTION Lucia Lacelle ACUREN JOB NO. 188-08-1596  
ADDRESS 1270 Aberdeen st. POWO No. P/O 7542  
Hawkesbury, Ont. WORK LOCATION Hawkesbury  
ACCEPTANCE STD. ASTM 1417/051-03 REV./DATE 2005  
PROJECT 206L FWD X-TUBE 407 HIGH APT X-TUBE ASSEMBLY  
ITEM(S) EXAMINED Sob # 42600, 42599, 41386, 41387

JOB DESCRIPTION PROCEDURE No. LT-002 REV./DATE TECHNIQUE No. LT-TECH 2 REV./DATE  
PART NO. D306667103, D407667205 MATERIAL ALODINED ALUM. THICKNESS  
SCOPE WET FLOURESCENT LIQUID PENETRANT INSPECTION CARRIED OUT  
ON 100% EXTERNAL SURFACE

TEST DETAILS  
METHOD ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED  
FAMILY BRAND MAGNAFLUX BLACK LIGHT S/N 0177 ☐ OUTPUT > 1000  $\mu$ W/cm<sup>2</sup> ☐ AMBIENT < 2 fc  
PENETRANT ZLC7 MINIMUM DWELL TIME 30 MIN. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE  
PENETRANT REMOVER H<sub>2</sub>O MINIMUM DRY TIME >10 MIN. OTHER CAL JAN 09  
DEVELOPER SKD52 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N CAL DUE DATE  
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

TEST SURFACE  
SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☐ MACHINED ☐ SHOT BLASTED ☒ CLEAN BARE METAL  
SURFACE TEMPERATURE ☐ < -4°C/20°F ☐ -4°C/20°F TO 10°C/50°F ☒ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

RESULTS- ( <input type="checkbox"/> METRIC <input checked="" type="checkbox"/> IMPERIAL )		ACCEPT	REJECT
<u>Sob # 3</u>	COMMENTS		
<u>41386:</u>	<u>Acceptable</u>	<input checked="" type="checkbox"/>	
<u>41387:</u>		<input checked="" type="checkbox"/>	
<u>42599:</u>		<input checked="" type="checkbox"/>	
<u>42600:</u>		<input checked="" type="checkbox"/>	

Scope of Services  
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.  
Standard of Care  
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES  
CLIENT REPRESENTATIVE Chantal Lavoie SIGNATURE Chantal Lavoie DTR #  
TECHNICIAN (SIGNATURE): FREDERICK CHAGNON REPORT REVIEWED BY:  
NAME (PRINT): FREDERICK CHAGNON NAME INITIALS  
CGSB LEVEL 1 SNT LEVEL 1 CGSB LEVEL 1 SNT LEVEL 1  
CGSB REG. No 10560 CGSB REG. No